SECTION C

C.1 PERFORMANCE REQUIREMENTS

The Contractor shall perform work in accordance with the Section C and provide all deliverables and reports in accordance with task order requirements.

C.1.1 Introduction

Work is to be accomplished for the Systems Simulation, Software and Integration (S3I) Directorate, U.S. Army Combat Capabilities Development Command (CCDC) - Aviation & Missile Center, herein referred to as Client(s), through the General Services Administration (GSA), Federal Acquisition Service (FAS), Assisted Acquisitions Services Division (AASD), Southeast Sunbelt Region.

C.2 SCOPE

The objective of this effort is to acquire systems engineering and computer resource engineering support within the domain of Battlefield Systems for the CCDC – Aviation & Missile Center, S3I Directorate. The acquired support will span the entire life cycle of systems for which S3I has responsibility. S3I customers include Department of Defense (DoD) components, other Federal government agencies, Cooperative Research and Development and Education Agreement partners, and Foreign Military Sales. Life cycle support is defined as the activity necessary to define concepts, define requirements, plan, manage, develop, sustain, modify, improve, test, train, field, and retire systems and system computer resources in a time frame necessary to meet customer needs.

The S3I has development and support responsibilities for several weapon systems and related support systems within the Battlefield Systems domain which is defined as, primarily, S3I support activities for Program Executive Office (PEO) Aviation, PEO Missile & Space, PEO Command Control Communications – Tactical (C3T), PEO Soldier, PEO Ground Combat Systems (GCS), PEO Combat Support & Combat Service Support (CS&CSS), PEO IEWS, Aviation and Missile Science and Technology (S&T), and related FMS efforts, Sustainment of tactical systems and subsystems for life cycle commands, or other entities and DoD services where these activities intersect. Representative examples of the Battlefield Systems domain include:

- Tactical Missiles & Launchers
- Tactical Radars
- Fire Support
- Close Combat
- Aviation, Manned and Unmanned
- Ground Systems
- Mission Planning
- Fire Control
- Automatic Test Equipment

- Automatic Identification Technology (AIT) and Unique Identification (UID)
- Command, Control and Communications
- Interoperability
- Communications & Data Links
- Support equipment
- Technology (embedded, LRUs) that is planned to be integrated on Battlefield systems
- Aviation and Missile System Technologies (Science & Technology)

Additionally, some cross domain effort based on conceptualization and/or prototyping shall be required.

C.3 PERFORMANCE REQUIREMENTS

The contractor shall perform the tasks described within the contents of this PWS and provide the labor and materials to provide the services specified below, which will be further delineated in written Technical Directions (TD) and other supplemental documents as authorized by the contracting officer's representative (COR). Information in the TDs may contain plans, including any drawings or specifications, software documentation, schedules, documentation and development requirements, required process, CDRLs, tools, reviews, appropriate PWS paragraphs and required data formats. The TDs will clearly define each task and will be prepared in sufficient time for the contractor to plan and respond. These documents will be supplemented by schedule and verbal information that will be updated as often as changing requirements dictate. The contractor shall provide technical/engineering support in life cycle software/systems engineering support of weapon systems, subsystems, and/or components to the S3I acquisition community, the US Army, and other customers (DOD, private industry, Joint Services, and foreign governments) for weapon system research, development, production, and post-deployment activities. These efforts are conducted primarily at Redstone Arsenal but support is also provided at other Continental United States (CONUS) and Outside CONUS (OCONUS) sites to include Combat theaters on a temporary duty basis.

The TD will identify a point of contact for the specified efforts.

The government on-site laboratories and functional areas to be supported consists of the areas identified in the information provided in the GSA Virtual Reading Room as well as any laboratories and functional areas that may, at some future date during the Period of Performance of this TO, come under the control of the S3I for Battlefield Systems efforts.

C.3.1 Program Management Services

C.3.1.1 The Contractor shall provide program management, support, and administration for individual tasks under this effort as well as the overarching program, and all tasks associated with the management of the overall program. This includes but is not limited to coordinating with S3I facilities, support for visit requests and building access, property transfers, lab management and material purchasing through the Government purchase system.

C.3.1.2 The Contractor shall prepare and deliver Technical Direction Management Plans (TDMPs). The TDMP will be used by the Government to ensure that the contractor support is planned, executed, and effectively integrated into each S3I project. The TDMP will include at a minimum, the following elements: organizational structure and personnel interfaces, technical approach/methodology, estimated travel, and schedule.

C.3.1.3 The Contractor shall include a contract work breakdown structure (WBS) in the TDMP.

C.3.1.4 The Contractor shall include a list of task specific Government Furnished Equipment (GFE) in the TDMP. Task specific GFE does not include general office equipment.

C.3.1.5 The Contractor shall include an estimate of material/equipment to be purchased by the contractor.

C.3.1.6 The Contractor shall include Cost Breakdown in the TDMP.

C.3.1.7 The Contractor shall include a list of project risks in the TDMP.

C.3.1.8 The Contractor shall include quality measures in the TDMP.

C.3.1.9 The Contractor shall include other resource requirements in the TDMP.

C.3.1.10 The Contractor shall participate in the development of the Government's Project Plan (PP) for programs using the Epic Process.

C.3.1.11 The Contractor shall participate in meetings, reviews, inspections, and audits and make presentations and provide resources for the reviews/audits/sprint reviews/scrums.

C.3.1.12 The Contractor shall plan, conduct, and execute a review for all contract activities quarterly. The quarterly review is estimated to be up to one-half day duration at a Government site at RSA, AL.

C.3.1.13 The Contractor shall participate in reviews as defined in the Project Plan for programs using the EPIC process. The following are examples of reviews that may be included based on requirements of the project being supported:

a. System/Software Requirements Review (SRR)

b. System/Software Design Review (SDR)
c. Software Specification Review (SSR)
d. Preliminary Design Review (PDR)
e. Critical Design Review (CDR)
f. In-Process Review (IPR)
g. Test Readiness Review (TRR)
h. Functional Configuration Audit (FCA)
i. Physical Configuration Audit (PCA)
j. Formal Qualification Review (FQR)

C.3.1.14 The Contractor shall prepare and provide a Progress, Status and Management report for all issued technical directions. The progress/status report will include information pertaining to cost, schedule, accomplishments, risks, impediments/issues, etc.

C.3.1.15 The Contractor shall participate in meetings as defined in the TD. The following are examples of meetings that may be included based on requirements of the project being supported:

a. Project Kickoff Meetings
b. Regular Team Meetings
c. Customer/Stakeholder Meetings
d. Sprints/Scrums/Kanban events

C.3.1.16 The Contractor shall execute and manage projects in compliance with S3I policies and procedures for programs using the EPIC process.

C.3.1.17 The Contractor shall provide a cost and performance management system. The cost and performance management system will include, at a minimum, period of performance, current and accurate cost information, actual dollars and hours spent, remaining dollars and hours, personnel assignments to include employee name, company, labor category and hours, burn out dates by employee name and invoice summaries. All information will be available per Technical Monitor and Technical Direction Number (TDN). The contractor shall provide access to the cost and performance management system for all contracting officers, contracting officers' representatives, and contracting officer technical representatives.

C.3.1.18 The Contractor shall develop, track, monitor, and control program schedules for meeting program commitments. The schedules shall be input into the government's schedule management tools. Schedules may include Integrated Master Schedules, milestone schedules, inch stone stones, and sprint plans. Tools used by individual projects include Wikis, JIRA,

Microsoft Project, etc.

C.3.1.19 The Contractor shall provide technical expertise in all areas of inventory control, accountability and location of equipment within the offices and laboratories.

This includes but is not limited to preparation of temporary hand receipts and property passes, equipment turn-in, sub-hand receipts, annual 100 percent physical inventories, and transportation of equipment between locations.

C.3.1.20 The contractor shall maintain communications security (COMSEC) accountability of key material (KEYMAT) used for testing in accordance with U.S. Army CCDC - Aviation & Missile Centerguidance and provide key fill support for functional testing of Controlled Cryptographic Items (CCI) on the platforms which utilize CCI.

C.3.1.21 The contractor shall support technology transfer programs. This includes but is not limited to Cooperative Research and Development Agreements (CRADA), Educational Partnership Agreements (EPA), and Bailment Agreements. Some tasks may be performed in partner facilities.

C.3.2 System Engineering Services.

C.3.2.1 The Contractor shall prepare and update the System Engineering Management Plan (SEMP).

C.3.2.2 The Contractor shall apply the systems engineering process throughout the project.

C.3.2.3 The Contractor shall perform systems requirements analysis and development. The requirements shall be input into the government's requirements management tools.
Tools used by individual projects include DOORS, Test Track Pro, Dimensions RM, Wikis, IBM Rhapsody Gateway, etc. Systems requirement analysis may also be based on change requests to prior versions for sustainment activities.

C.3.2.3.1 The Contractor shall prepare and execute system requirements reviews.
Reviews may include System Requirement Review (SRR), Peer Reviews, etc.

C.3.2.3.2 The Contractor shall conduct market research and evaluate potential use and application of Non-Developmental and commercial off the shelf items.

C.3.2.3.3 The Contractor shall conduct assessments of existing systems/software to provide recommendations on product enhancements and improvements.

C.3.2.3.4 The Contractor shall analyze existing tactical systems to capture requirements and design.

C.3.2.3.5 The Contractor shall conduct human factors engineering analyses.

C.3.2.4 The Contractor shall develop and maintain bidirectional traceability between software/system engineering products to ensure delivered products meet system and performance requirements.

C.3.2.5 The Contractor shall develop and analyze system level architectures and lower level decomposed architectures to meet system and performance requirements.

C.3.2.6 The Contractor shall evaluate, develop, maintain, and implement a system design for the requirements. The design shall be input into the government's design tools.
Tools used by individual projects include IBM Rhapsody, Enterprise Architect, Wikis, etc.

C.3.2.6.1 The Contractor shall prepare and execute system design reviews. Reviews may include Peer Reviews, In Process Reviews, Preliminary Design Review (PDR), Critical Design Reviews (CDR), sprints, scrums, Kanban reviews, etc.

C.3.2.7 The Contractor shall integrate and install systems, subsystems, hardware, and software for product development, tests, and fielding. Integrated components include GOTS, COTS, or other provided equipment and information.

C.3.2.8 The Contractor shall conduct system performance analysis and provide analysis reports.

C.3.2.9 The Contractor shall participate in testing for the Government's system baselines.

C.3.2.10 The Contractor shall participate in the System/Software/Hardware Safety activities for a program.

C.3.2.11 The Contractor shall participate in the Information Assurance and Cyber Security

activities for a program. Contractor participation in Information Assurance and Cyber Security includes documenting Standard Operating Procedures (SOPs), following/implementing Army/DoD STIGs, following/implementing security procedures/regulations, documenting technical information (e.g., design, architecture), comply with TTPs, and generate and maintain other artifacts to support the accreditation process (e.g., appointment letters, certifications of training, network diagrams, hardware/software lists)

C.3.2.11.1 The Contractor shall support preparation of accreditation packages. Accreditation packages include DIACAP, RMF, etc.

C.3.2.12 The Contractor shall participate in Interoperability Engineering activities for a program.

C.3.2.13 The Contractor shall participate in Independent Verification and Validation (IV&V) activities for a program.

C.3.2.14 The Contractor shall participate in the Materiel Release activities for a program. Refer to Army Regulation 700-142 for Materiel Release.

C.3.2.15 The Contractor shall develop, install, checkout, and maintain tactical, Government-owned, and commercial hardware and software as part of the System/Software Support Environment (SSSE).

C.3.2.16 The Contractor shall operate and maintain the systems/software/hardware.

C.3.3 Software Engineering Services.

C.3.3.1 The Contractor shall prepare and update the Government's Software Development Plan (SDP) for individual S3I software/systems.

C.3.3.2 The Contractor shall perform software requirements analysis and development to meet S3I customer requirements for software/systems. The requirements shall be input into the government's requirements management tools. Tools used by individual projects include DOORS, Test Track Pro, Dimensions RM, Wikis, etc.

C.3.3.2.1 The Contractor shall prepare and execute software requirements reviews. Reviews may include Software Requirement Review (SRR), Peer Reviews, sprints, scrums, Kanban reviews, etc.

C.3.3.3 The Contractor shall evaluate, develop, maintain, and implement a software design for the requirements of systems/software. The design shall be input into the government's design

tools. Tools used by individual projects include IBM Rhapsody, Enterprise Architect, Wikis, etc.

C.3.3.3.1 The Contractor shall prepare and execute software design reviews. Reviews may include Peer Reviews, In Process Reviews, Preliminary Design Review (PDR), Critical Design Reviews (CDR), Inception Reviews, Elaboration Reviews, Construction Reviews, daily standups, sprint reviews, sprint planning, etc.

C.3.3.4 The Contractor shall perform code and script development and unit testing for the design. The code and scripts shall be input into government source code version control systems. The code shall be documented and developed in accordance with the project's coding standards. Programming languages used include C, C++, C#, FORTRAN, Ada, Java, HTML, Angular, ATLAS, Labview/LabWindows CVI, MATLAB, PHP and other languages as dictated by the program requirements. Source code version control systems include Perforce, Subversion, Dimensions CM, Surround SCM, and others. Platforms include but are not limited to Microsoft Windows environments, Linux/UNIX variants, Real Time operating systems such as VxWorks, LynxOS, Integrity, and Android and iOS operating systems.

C.3.3.4.1 The Contractor shall participate in the creation, operation, and maintenance of the Government's Software Development Environment for individual S3I software/systems. This includes management of Software Licenses/Renewals.

C.3.3.5 The Contractor shall perform software testing and verification. Test procedures and results shall be input in the government's test tracking tools. Testing may include unit tests, integration tests, continuous automated tests, code quality/standard conformance verification, and formal qualification/acceptance tests. Tools used by individual projects include Test Track Pro, Wikis, JIRA, Verify, Understand, Clockwork, Code Peer, Expect, etc.

C.3.3.6 The Contractor shall design, analyze, evaluate, develop, operate, maintain, and verify Simulations and Support Software for S3I supported systems. Simulation and Support software examples include constructive, virtual, distributed, hardware-in-the-loop and live simulations, test drivers, instrumentation, emulators/simulators, system models, code analysis tools, data collection and analysis tools to support to the design, development, and testing of a product/system.

C.3.3.6.1 The Contractor shall develop models and representations of systems, subsystems, platforms, terrain, environment, endo/exo-atmospheric threats, and effects in simulation

appropriate formats, to populate virtual and constructive environments.

C.3.3.7 The Contractor shall perform maintenance of system software for S3I supported systems. Software maintenance includes bug fixes enhancements, and updates.

C.3.3.8 The Contractor shall design, develop, update and maintain databases. This includes but is not limited to data base design, data base entry, and data base management. The databases are built in but not limited to SQL server, Oracle and Coherence.

C.3.3.9 The Contractor shall develop statistics tracking applications. The Contractor shall collect and report product, user interface, and customer statistics in dashboard or report format.

3.3.10 The Contractor shall collect assessment data. This includes surveys and data feeds.

C.3.3.11 The Contractor shall design, develop, update and maintain database environments for development, integration, beta test, and production.

C.3.3.12 The Contractor shall interface software with new and existing commercial and tactical software and hardware.

C.3.3.13 In coordination with CADM office, the Contractor shall create release builds for software testing and fielding.

C.3.4 Hardware Engineering Services.

C.3.4.1 The Contractor shall prepare and update the Government's Hardware Development Plan (HDP) for all systems that S3I has responsibility.

C.3.4.2 The Contractor shall perform hardware requirements analysis and development.

C.3.4.2.1 The Contractor shall prepare and execute hardware requirements reviews. Reviews may include Hardware Requirement Review (HRR), Peer Reviews, etc.

C.3.4.3 The Contractor shall implement, evaluate, develop, and maintain hardware designs for the requirements of systems/software. Hardware designs include mechanical structures and boxes, printed circuit boards, cables, and other hardware items as dictated by the program requirements.

C.3.4.3.1 The Contractor shall prepare and execute hardware design reviews. Reviews may include Peer Reviews, In Process Reviews, Preliminary Design Review (PDR), Critical Design Reviews (CDR), daily standup, etc.

C.3.4.4 The Contractor shall build, fabricate, maintain, repair, and checkout system hardware and cabling. Hardware implementation includes brass boards, prototypes, demonstration/evaluation/orientation units, automated test equipment, test fixtures, and training devices for use in technical reviews, testing/qualification, configuration audits, production prove out and other program requirements/milestones as dictated by program requirements. This task may include soldering.

C.3.4.5 The Contractor shall perform testing and verification of hardware. Hardware testing may include initial system/subsystem checkout, integration testing, production prove out, and formal acceptance testing.

C.3.4.6 The Contractor shall update, maintain, and repair fielded system hardware.

C.3.4.7 The Contractor shall design and develop recommended component replacements/improvements for obsolete system hardware components.

C.3.4.8 Reserved

C.3.4.9 Reserved

C.3.4.10 The Contractor shall perform Additive Manufacturing. This includes proper safety procedures.

C.3.4.10.1 The Contractor shall track and manage all materials used for Additive Manufacturing.

C.3.4.11 The Contractor shall develop, update and maintain the hardware drawing package. The hardware drawing package may include but are not limited to mechanical drawings (3D model file and 2D files), 3D graphic files, 3D image data, 2D and 3D design data and metadata, Gerber files for circuit boards (copper layers, solder mask, legend, etc.), cable drawings, parts lists, assembly drawings, schematics, and cable interconnection drawings. Standard ASME Y14.5 for drawing packages.

C.3.4.12 The Contractor shall operate, update and maintain the hardware development and maintenance environment. This includes maintenance of the software licenses, equipment, and storage.

C.3.4.13 The Contractor shall develop interfaces with commercial and tactical hardware.

C.3.4.14 The Contractor shall support Physical Configuration Audits to validate the mechanical drawings.

C.3.4.15 The Contractor shall develop and maintain Field Programmable Gate Array (FPGA) and microcontroller firmware.

C.3.5 Test Engineering Services.

C.3.5.1 The Contractor shall produce and maintain test plans, test descriptions, and test reports for systems, subsystems, hardware, and software.

C.3.5.1.1 The Contractor shall prepare and execute test reviews. Reviews may include Test Readiness Review (TRR), Post-Test Review, etc.

C.3.5.2 The Contractor shall participate in the development, operation, and maintenance of the Test Environment. Test Environments may include automated test equipment, instrumentation, software test tools, tactical test beds/system representations, commercial test tools, stimulation/emulation systems, communications/networks, analysis tools, and software licenses.

C.3.5.2.1 The Contractor shall produce and update the Government's Test Environment Development Plan (TEDP).

C.3.5.2.2 The Contractor shall perform test environment requirements analysis and development.

C.3.5.2.2.1 The Contractor shall prepare and execute test environment requirements reviews. Reviews may include Test Environment Requirement Review, Peer Reviews, etc.

C.3.5.2.3 The Contractor shall evaluate, develop, implement, and maintain the test environment requirements into a test environment design.

C.3.5.2.3.1 The Contractor shall execute and prepare test environment design reviews.

Reviews may include Peer Reviews, In Process Reviews, Preliminary Design Review (PDR), Critical Design Reviews (CDR), daily standup, sprint review, sprint planning, etc.

C.3.5.2.4 The Contractor shall build, checkout, and operate the test environments. Hardware implementation can include building of hardware for prototypes, demonstration/evaluation units, technical review entrance/exit criteria, testing/qualification, configuration audits, and other program requirements/milestones.

C.3.5.2.5 The Contractor shall perform verification of the Test Environment.

C.3.5.2.6 The Contractor shall update and maintain the test environments.

C.3.5.3 The Contractor shall execute test plans for systems, subsystems, hardware, and software.

C.3.5.4 The Contractor shall provide support for early customer/user evaluations, demonstrations, interoperability tests/events, certification tests, operational testing, Warfighter experiments/evaluations/exercises, human factors optimization, and personnel performance. Certification and interoperability tests, include Army and Joint Interoperability Certification Tests, Tactical Data Link Interface Tests.

C.3.5.4.1 The Contractor shall participate in the planning, execution, and analysis for test events. Events include planning meetings/conferences, site surveys, requirements reviews, system setup/integration/troubleshooting/checkout, system operation, and posttest reviews/analysis meetings.

C.3.5.5 The Contractor shall perform environmental and vibration testing on systems and system components.

C.3.6 Transition Support Services.

C.3.6.1 The Contractor shall assess supportability, suitability, and availability for hardware and software system components, technical data packages, development environments, test environments, and support tools. J-STD-016 will be used for reference and information only. Refer to DA Pamphlet 700-127 for supportability considerations.

C.3.6.1.1 The Contractor shall document supportability findings, deficiencies, and risks for systems to be transitioned. Report types include Software Supportability Assessment Reports and

Software Suitability Assessment Reports.

C.3.6.2 The Contractor shall update and prepare Transition Plans, Post Deployment Software Support (PDSS) Plans, and Post Production Software Support (PPSS) Plans for systems/software being transitioned to S3I.

C.3.6.3 The Contractor shall transition, establish, and develop the SSSE hardware and software environments for systems to be transitioned to the S3I. This includes but is not limited to software licenses, tactical hardware, simulation environments, and other support equipment.

C.3.6.3.1 The Contractor shall demonstrate the capability of the development environment to replicate the software.

C.3.6.3.2 The Contractor shall verify replicated software products for conformance to procedures and expected test results.

C.3.7 Fielding and User Support Services.

C.3.7.1 The Contractor shall support the S3I Configuration and Data Management (CADM) office in the preparation, distribution, and delivery of software, systems, and support products for end user systems. Distribution may include physical media or electronic methods based on program requirements.

C.3.7.1.1 The Contractor shall support the CADM office in the preparing and updating distribution records of software versions installed on end user hardware.

C.3.7.1.2 The Contractor shall control and track specified parts, fielded units, and hardware maintenance in the governments tracking tools.

C.3.7.2 The Contractor shall coordinate and schedule fielding of systems updates for end users.

C.3.7.3 The Contractor shall assemble, install, configure, and deliver software, systems, and kits for end user systems.

C.3.7.4 The Contractor shall provide operational support and field support including deployment of the system/software for local and remote locations. Remote locations span all theaters of operations, CONUS and OCONUS.

C.3.7.5 The Contractor shall design, develop, configure, manage and maintain the networks and

the network infrastructure. Representative networks include development, test, deployment, and operational networks as well as associated lab/support networks.

C.3.7.5.1 The Contractor shall design, develop, update and maintain local and distributed server and website environments for development, integration, beta test, and production. This includes SSL Certificates and domain names IP addresses.

C.3.7.5.2 The Contractor shall configure, maintain, and manage both virtual and physical servers.

C.3.7.5.3 The Contractor shall design, develop, configure, manage and maintain portals and repositories for software, data, and multimedia storage and distribution.

C.3.7.6 The Contractor shall provide technical editing and formatting for documents produced under this PWS.

C.3.8 Training Support Services.

C.3.8.1 The Contractor shall develop training programs, devices, materials, content, curriculum, and reports for projects, systems, subsystems, hardware, software, processes, and non-system specific mission tasks. Training includes tutorials, seminars, classroom presentations, educational venues, overviews, guidebooks, interactive multimedia, videos, and other types of content as dictated by program requirements. The training includes but is not limited to system and software new user, recurring, and periodic training.

C.3.8.2 The Contractor shall conduct demonstrations and training for S3I customers, end users, and other project stakeholders including the general public.

C.3.9 Configuration Management Services.

C.3.9.1 The Contractor shall participate in the establishment, implementation, and operation of a Developer Change Control (DCC) program for day-to-day change control of work products being developed under this PWS.

C.3.9.2 The Contractor shall participate in managing changes to baselines and coordinate with the S3I Configuration and Data Management (CADM) office using CADM policies, procedures, and tools.

C.3.9.3 The Contractor shall participate in S3I Configuration Control Boards (SCCBs) for the

purpose of capturing and managing the Technical Data Package (TDP) in coordination with the CADM office.

C.3.10 Quality Engineering Services.

C.3.10.1 The Contractor shall participate in the development of the Government's Quality Program Plans (QPPs) for individual S3I software/systems.

C.3.10.2 The Contractor shall implement the project's QPP for individual S3I software/systems.

C.3.10.3 The Contractor shall coordinate with S3I Quality Assurance (QA) to perform project level Quality Assurance activities.

C.3.10.4 The Contractor shall provide quality program progress and status reports for quality program performance activities, problems, and plans. The project plans (i.e. QPP, CMP, SDP, or other plan) may document the program quality requirements.

C.3.11 Senior Level Engineering Support Services.

C.3.11.1 The Contractor shall perform analysis and assessment for lifecycle computer resources. This includes resources utilization, reverse engineering of legacy systems, obsolescence analysis, language upgrades, and other trade studies, engineering evaluations, or analysis of alternatives.

C.3.11.2 The Contractor shall analyze and implement standardization for hardware and software.

C.3.11.3 The Contractor shall participate in concept of operations development.

C.3.11.4 The Contractor shall perform impact assessments of DoD Acquisition Lifecycle policies, processes, documentation, and initiatives. These include DoD 5000 process and the Better Buying Power initiative and responses to higher level command inquiries.

C.3.11.5 The Contractor shall provide domain specific lifecycle engineering support for Battlefield domains.

C.3.12 Engineering Support Services.

C.3.12.1 The Contractor shall provide Foreign Military Sales (FMS) support for all paragraphs of this PWS as required. The Contractor shall perform export administration management as required to ensure compliance with US and applicable foreign trade control regulations as the

regulation relates to performance scope of the task order. The Contractor shall provide applicable export control measures to ensure trade compliance as required. Export compliance includes performing and managing all aspects of export and import authorization responsibility and accountability including planning, obtaining, activating, and export authorizations to comply with International Traffic in Arms Regulations (ITAR), Export Administration Regulations (EAR), Office of Foreign Assets Control (OFAC), Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE), U.S. Customs Border Protection and other Non-U.S. Jurisdictions or Government local laws.

C.3.12.2 The Contractor shall develop, implement, demonstrate, assess, and train infrastructure improvements, productivity tools, processes, and techniques for system specific and non-system specific applications. Productivity tools, processes, and techniques can include technical, cost and manpower productivity improvements. Infrastructure includes S3I local area networks, hardware, applications, site assessments and analyses.

C.3.12.3 The Contractor shall develop material for and participate in briefings, meetings, tours, demonstrations, clinics, seminars, and conferences to include on-site creation and delivery of high quality graphics/videos, briefing material, and exhibit support equipment. This includes but is not limited to capabilities and product demonstrations and tours for customers, potential customers, partners, and higher Army management.

C.3.12.3.1 The Contractor shall capture and document meeting minutes.

C.3.12.3.2 The Contractor shall capture and track action items.

C.3.12.4 The Contractor shall participate in software process assessments, software process improvement planning, software process documentation, organizational metrics collection, metrics analysis, and metrics reporting. Software processes include Software Engineering Institutes Capability Maturity Model Integrated models, Agile development methods, and other state of the art processes.

C.3.12.5 The Contractor shall research, develop, evaluate, and transition emerging technologies for technology insertion.

C.3.12.6 The Contractor shall apply and use Government provided tools, environments, and methods for the performance of this PWS. Government provided tools and methods include EPIC, Wiki, JIRA, Perforce, domain specific model based system engineering methods, and COTS applications. Data input into government systems may include test plans, descriptions and

reports, distribution records. Add tools for drawing package and model creation.

C.3.12.7 The Contractor shall assess and implement reuse of assets and information for all software/systems that S3I has responsibility. This activity includes reuse of software code, models, hardware designs, products, and labs for which the government has use rights.

C.3.12.8 The Contractor shall produce and update associated Technical Data Package (TDP) documentation. TDP documentation may include but not be limited to any of the following:

- Software/System Requirements Specifications:
- Software/System Design Documents
- Software/System Test Plans
- Software/System Test Descriptions
- Software/System Test Report
- Hardware Requirements Specifications
- Hardware Design Documents
- Hardware Test Plans
- Hardware Test Descriptions
- Hardware Drawings
- System and/or Software User's Manual
- Operation and Maintenance Manual
- Installation Manuals
- Hardware Setup Manuals
- System and/or Software Version Description Document

TDP documentation may be produced in electronic formats to include MS Word, FileMaker, Wikis, etc.

C.3.12.9 The Contractor shall configure, maintain, and operate tactical, government and commercial vehicles, specialized equipment for loading/unloading equipment to include forklifts and overhead cranes, machine tools, communications infrastructure, and equipment for supporting the other activities of this PWS. An appropriate license/accreditation may be required.

C.3.12.10 The Contractor shall package, ship, and transport materials as required for support of mission needs. Transporting materials may include hand carrying classified materials.

C.3.12.10.1 The contractor shall develop and maintain shipping containers for components and systems.

C.3.12.11 The Contractor shall acquire needed materials for support of activities performed under this PWS.

C.3.12.12 The Contractor shall maintain orderly, safe, and secure work areas.

C.3.12.13 The Contractor shall work collaboratively with other contractors internal and external to S3I and Government Partners (CRADA and EPA partners) in the performance of this PWS.

C.3.12.14 The Contractor shall input, track, assess and address issues, defects, and change requests in the government's tracking tools. Government tracking tools include Dimensions CM, JIRA, Test Track Pro, and Team Foundation Server, etc.

C.3.13 Data Analytics Support Services.

C.3.13.1 The Contractor shall perform data analytics services. These services include data analysis, assessments of current systems, predictive analytics, prescriptive analytics, enterprise decision management, data visualization and data dissemination.

C. 3.13.2 The Contractor shall define and implement data governance.

(END OF SECTION C)